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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,502	03/15/2004	Corbin L. Champion	200312347-1	9353

22879 7590 01/12/2007

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FORT COLLINS, CO 80527-2400

EXAMINER
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ORTIZ CRIADO, JORGE L

ART UNIT	PAPER NUMBER
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2627

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/12/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/800,502	<b>Applicant(s)</b> CHAMPION ET AL.	
	<b>Examiner</b> Jorge L. Ortiz-Criado	<b>Art Unit</b> 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-16 is/are allowed.
- 6) ☒ Claim(s) 17-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuroda et al. J.P. Publication No. 08-297870.

Regarding claim 17, Kuroda et al. discloses a method of storing data in a storage device (Drawing 1), comprising: forming dents (205) in at least some of storage cells (recording areas) formed in a storage medium (104/201);

electrically contacting a first portion of a tip of a probe (204/105) to a surface of the storage medium in response to the tip being engaged at a first storage cell (first recording area), the first storage cell having a dent (205); (See Drawings 2; top and middle figures; paragraph [0008]); a voltage is being applied to the probe)

and electrically isolating the first portion of the tip from the surface of the storage medium in response to the tip being engaged at a second storage cell (second recording area), the

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second storage cell not having a dent (205 not formed) (See Drawings 2; bottom figure; paragraph [0008]); no voltage is being applied to the probe).

Regarding claim 18, Kuroda et al. discloses wherein forming the dents comprises heating respective regions of the storage medium corresponding to the storage cells to melt the respective regions to enable the tip of the probe to imprint the dents (205) in the melted regions (See Drawings 2; bottom figure; paragraph [0008]).

Regarding claim 19, Kuroda et al. discloses further comprising moving the storage medium (104/201) with respect to the probe (105/204) to enable the probe to form the dents (205) in the at least some of the storage cells during a write operation (see [0007]; x,y,z driving unit 103).

Regarding claim 20, Kuroda et al. discloses further comprising moving the storage medium with respect to the probe to enable the probe to detect for storage states of respective storage cells during a read operation (see [0010]; x,y,z driving unit 103).

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No(s): 6,218,086; 6,084,849.

E.P. Publication No(s): 1130578; 0468456.

*Allowable Subject Matter*

3. Claims 1-16 are allowed.

The following is an examiner's statement of reasons for allowance:

In regard to claim 1 the prior art made of record either alone or in combination does not teach or fairly suggest with the other elements of the claims that the second portion of the tip is electrically contacted to the surface of the storage medium in response to the first portion being engaged in the dent and wherein the second portion of the tip is spaced apart from the surface of the storage medium in response to the first portion being engaged on the surface of the storage medium and not engaged in the dent.

In regard to claim 12, the prior art made of record either alone or in combination does not teach or fairly suggest with the other elements of the claims the tip having an electrically conductive portion that is electrically contacted to a surface of the storage medium in response to the tip of the probe being engaged in the dent of the first storage cell, and the electrically conductive portion of the tip of the probe being spaced apart from the surface of the storage medium in response to the tip not being engaged in a dent in the second storage cell.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jorge L. Ortiz-Criado whose telephone number is (571) 272-7624. The examiner can normally be reached on Mon.-Thu.(12:30 pm- 9:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea L. Wellington can be reached on (571) 272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

joc

  
ANDREA WELLINGTON  
SUPERVISORY PATENT EXAMINER